The President's Council on Year 2000 Conversion

First Quarterly Summary of Assessment Information

January 7, 1999

TABLE OF CONTENTS

CHAIRMAN'S STATEMENT

With slightly less than a year until January 1, 2000, the President's Council on Year 2000 Conversion is committed to providing the public on a regular basis information it has obtained about the status of government and industry efforts to combat the Year 2000 (Y2K) computer problem.

This report summarizes information the President's Council and its more than 25 working groups have

gathered either from Federal agencies or through cooperative working relationships with industry trade associations and other groups who are assessing their members' preparedness for the century date change. It is the first in a series of quarterly reports the Council will release in 1999.

It is important to note that, in several industry areas, trade associations are still working to gather initial survey data on the status of their members' Year 2000 efforts. Where possible, the report indicates target dates for completing that work and making information publicly available. The content and format for information collected over the past few months also varies and, in some cases, is very preliminary. The Council is encouraging trade associations to collect information in a more standard format in future surveys.

Subject to these limitations, the available data provide the following information about the level of preparedness among key industries:

- Virtually all of the industry areas report high awareness of the problem and its potential consequences.

- Participants in several areas are mounting aggressive efforts to combat the problem and to ensure that critical systems will be able to process the date change to the Year 2000. Financial institutions, including banks and securities firms, are most notable for their coordination and progress.

- We are increasingly confident that there will not be large-scale disruptions among banks and in the power and telecommunications industries. Disruptions that do occur will most likely be of a more localized nature.

- Large organizations often have a better handle on the problem than some of their smaller counterparts. While many small and medium-sized businesses and governments are focused on solving the Year 2000 problem and have made significant progress, some continue to believe the problem will not affect them or are delaying action until failures occur. Lack of preparedness among these organizations increases the risk for localized Y2K disruptions.

- International failures are likely. Despite recent increased efforts, a number of countries have thus far done little to remediate critical systems. These failures could have a significant impact upon the United States, especially in areas that rely heavily upon cross-border operations.

At the Federal level, agencies are working to prepare critical systems for the Year 2000, and have mounted aggressive efforts to ensure that critical services will not be disrupted by the transition to the new millennium. According to the most recent OMB report on agency progress, as of November 15, 1998, 61 percent of Federal critical systems were Y2K compliant, up from 27 percent a year earlier. The November data also indicated that 90 percent of critical systems requiring repair have already been fixed and are now being tested. A small percentage of critical systems are not expected to meet the March 1999 goal of having all critical systems Y2K compliant, and agencies will produce specific benchmarks for completing work on these systems before January 1, 2000. All agencies are working to develop contingency plans in the event of internal or external failures.

There is still time remaining for organizations, especially smaller firms, to prepare their critical systems for the Year 2000. But at the same time, all organizations should be developing back-up, or contingency, plans to address internal and external Y2K-related failures. Effective contingency plans will help to minimize Year 2000 disruptions.

I. INTRODUCTION

Over the past 50 years, computers have made what was once thought impossible -- possible -- in finance, transportation, communications, health care and other areas. From electronic commerce to high-speed international telecommunications service to medical breakthroughs, they have been engines for social and economic progress. Information technology has become more pervasive in the every day activities of organizations and individuals around the world.

But human beings, the inventors of this remarkable technology, are not infallible. Now, what once was a rational decision -- to use two digits to represent the year in many computer systems -- is now the Year 2000 (Y2K) problem, an enormous challenge to governments and businesses around the world whose operations depend upon these systems.

This report of the President's Council on Year 2000 Conversion is the first in a series of quarterly documents that will summarize industry and other assessments of efforts to ensure that information technology systems are ready for the century date change. Information on the level of preparedness is sparse within some industry areas where trade associations and groups are just beginning efforts to survey their members. In these areas, the report outlines how information is being gathered and when further detail is expected.

The Y2K Problem

The Y2K computer problem is caused by a shortcut used in many information technology systems. Years ago, to conserve memory space, computer programmers used two digits to record the year -- for example, 98 would mean 1998. Over time, this became standard programming practice.

Many information technology systems that require knowing the year, and use two-digit coding to record it, will, on January 1, 2000, recognize 00 not as the Year 2000 but as the Year 1900. This glitch could cause them to either shut down or malfunction, a significant problem in our electronic information-dependent society.

The Y2K problem is not new. People have known for years that two-digit coding would create difficulties when the Year 2000 arrived. But many organizations in the United States and around the world have been slow to act. Some assumed that a "quick-fix" would materialize that would enable systems dependent on two-digit coding to process the Year 2000 or that older systems would be replaced by newer, Y2K-compliant models. Unfortunately, there is no permanent, universal quick-fix and, in many cases, older, non-compliant systems remain in operation.

The Y2K problem is solvable. Businesses and governments know how to fix non- compliant systems and are devoting significant financial and personnel resources toward doing so. Several major financial institutions are spending hundreds of millions to ensure that their systems will operate in the Year

2000. As of November 15, 1998, the Federal Government estimates it will spend $6.4 billion to fix its mission-critical systems.

Solving the Y2K problem is primarily a management challenge. Repair and replacement of systems and their interconnections takes time, and January 1, 2000, is an immovable deadline. Ensuring that critical systems are ready for the Year 2000 is a matter of prioritizing what needs to be fixed, devoting adequate personnel and financial resources to the project, and developing back-up, or contingency, plans to be used in the event that systems, both internal and external, fail.

The Council

The President's Council on Year 2000 Conversion, established on February 4, 1998 by Executive Order 13073, coordinates the Federal Government's efforts to address the Year 2000 problem.

The Federal Government, like any business or organization, is responsible for fixing its critical systems. But it also is working to encourage the private sector and other governments to do the same for the systems for which they have responsibility. Thus, the Council's mission is two-fold: (1) to work with the agencies to prepare critical Federal systems for the Year 2000, and (2) to promote action on the problem outside the Federal Government -- among businesses, State, local, and Tribal governments, and foreign entities.

The Council is made up of representatives from more than 30 major Federal executive and regulatory agencies that are active in diverse areas such as transportation, banking, and telecommunications. Council members work together to exchange information on agency Y2K progress and shared challenges. They also coordinate interagency testing efforts for programs that rely upon multiple agency systems and assist each other with contingency planning efforts for potential Y2K-related failures.

To reach out beyond the Federal Government, Council members have formed working groups to focus on the Y2K challenges in over 25 sector areas such as finance, communications, transportation, electric power, health care, water supply and building operations. The working groups have reached out to form cooperative working relationships with the major trade associations and other umbrella organizations representing the individual entities operating in each sector. Working group outreach efforts are designed to increase the level of awareness and action on the problem and to promote the sharing of information between entities.

Information Gathering

The Council has also been working with these outside organizations to gather industry assessments of Y2K preparedness and to encourage companies and governments to share publicly information about the status of their own Year 2000 efforts.

Trade associations have special abilities to reach large numbers of participants within a particular

industry and are especially aware of their most critical Y2K challenges. Industry participants generally are also more comfortable providing candid information confidentially to their umbrella organizations rather than directly to government agencies. These industry assessments, which the Council makes publicly available through its web site (**www.y2k.gov**) as soon as they are available, are important because they provide businesses, governments, and the general public with information about the status of Y2K efforts in key areas of the economy.

For example, an organization that has finished work on its systems could still be vulnerable to the Y2K problem if its business partners are not prepared. A local grocery store may have ensured that its cash registers and inventory software are Year 2000 compliant, but Y2K failures among suppliers could affect the store's bottom line. Information on progress among suppliers could help the store prepare an effective back-up plan.

Governments also rely upon information gathering efforts to prepare contingency plans so that key governmental services will not be disrupted and to respond to emergencies that may result from Y2K-related failures. And consumers need information on the Y2K progress of their local businesses and governments so that they can make their own informed decisions.

To help associations and other groups collect and share information on the status of Y2K efforts, the Administration worked with Congress to enact the "Year 2000 Information and Readiness Disclosure Act." This bipartisan legislation provides protection against the use in civil litigation of technical Year 2000 information about an organization's experiences with product compliance, system fixes, testing protocols and testing results when that information is disclosed in good faith. It also includes important protections for information gathering that is designated as a "special data gathering request" under the Act. These collections of information cannot be reached by private litigants, or used by Federal agencies for regulatory or oversight purposes, except "with the express consent or permission" of the provider of the information.

Industry Assessments

Shortly after President Clinton signed the "Year 2000 Information and Readiness Disclosure Act" on October 19, 1998, the Council provided industry associations with a guide for Y2K information gathering based on earlier surveys designed by some of the Council's working groups.

The Council suggested that industry trade associations gather from their members the following information:

- Do you have a plan for addressing the Y2K problem?

- Does it include defined milestones?

- Has your chief executive approved the plan?

- Does the plan define a Y2K organizational structure?

- How have you organized your Y2K work?

• How much to you expect to spend on fixing the problem? How much have you spent to date?

• What percentage of the work of repairing or replacing mission-critical systems have you completed for:

-- assessment (inventory and analyze systems supporting the core business areas and prioritize their conversion or replacement),

-- renovation (convert, replace, or eliminate systems),

-- validation (test, verify, and validate converted or replaced systems), and

-- implementation (integrate converted or replaced systems into the system environment where routine information processing activities are performed)?

• Have you designed, tested, and put in place plans for internal and external contingencies?

• If you operate internationally, are you encountering any special difficulties related to the Y2K problem?

II. CRITICAL SERVICES

For the purposes of this initial report, the Council has identified and summarized assessment information for nine sector areas covering the provision of critical services. They are: benefits payments, communications, electric power, emergency services, financial services, oil and gas, solid waste, transportation, water supply.

In every area except for benefits payments, the Council is relying partially or entirely on industry trade associations to provide assessment information on Y2K progress within their sectors. As noted earlier, many trade associations are still working to gather initial or more comprehensive survey data on the status of their members' Year 2000 efforts. Target dates for completing that work and making information publicly available are provided in those instances.

"Y2K compliant" systems are those that have been tested, are operational, and can accurately process data through the century date change.

BENEFITS PAYMENTS

(Working Group Chair -- Social Security Administration)

There is still work to be done to ensure the complete Year 2000 readiness of all systems responsible for making Federal benefit payments, but agencies expect that they will be able to deliver payments without disruption in January 2000. These benefit payments include Social Security, Supplemental Security Income, Government civilian and military pensions, veterans benefits, and unemployment insurance.

Social Security Administration

The Social Security Administration (SSA) has made all its systems that produce Social Security and Supplemental Security Income (SSI) payments Year 2000 compliant, and has tested and certified those systems. In addition, testing from SSA through the Treasury Department and the Federal Reserve for direct deposit payments was also successfully completed. Beginning with payments made in October 1998, the Social Security and SSI benefit payments were generated using Year 2000 compliant software at both SSA and Treasury. Treasury Department systems for making monthly Social Security and SSI payments received independent verification of their Y2K compliance in December 1998.

With regard to disability benefits, SSA is working very closely with the State Disability Determination Services (DDSs) to ensure there is no disruption to State systems which support medical determinations in the Social Security and Supplemental Security Income Disability claims process. There are 50 States and territories with automated systems. As of November 30, 1998, 45 DDS systems have been renovated, tested and implemented. All 50 systems are expected to be Year 2000 compliant by January 1999. SSA and each State DDS have developed Business Continuity and Contingency Plans in the event that unforeseen problems occur. These plans address measures to be taken to ensure payments are made and claims are processed.

Department of Defense

The Defense Department is confident that payments to military retirees and annuitants will continue uninterrupted in January 2000. All programming changes and testing of programs for the pay system and its interfaces have been completed. The Year 2000 compliant programs were implemented in October 1998. The pay system software will be migrated to a Year 2000 compliant processing environment, tested and implemented by March 31, 1999. Additional end-to-end testing with interfacing partners is scheduled for mid-1999. Successful completion of these tests and continued close contact with interfacing partners will ensure a smooth transition to January 2000.

Department of Veterans Affairs

The Department of Veterans Affairs (VA) is making Year 2000 compliant all systems that deliver

compensation, pension, education, vocational rehabilitation and loan guaranty benefits to veterans. As of October 31, 1998, 99 percent of all benefit payment programs were renovated, and 72 percent were implemented. All programs are scheduled for implementation by March 31, 1999. VA is currently developing business continuity and contingency plans for its benefits delivery business areas. These plans are expected to be completed by January 1999. The Treasury Department systems that make payments on behalf of VA are scheduled to be implemented at the end of 1998.

Office of Personnel Management

The Office of Personnel Management (OPM) continues to make significant progress in achieving compliance for the mission-critical systems of its Retirement and Insurance Service that support the provision of benefit services to Federal employees and annuitants. As of October 1998, OPM has completed renovation of these mission-critical systems, and has validated and implemented almost half of them. OPM anticipates completing the validation and implementation phases by January 1999. OPM is also validating Y2K compliance with the more than 200 partners with whom it exchanges data and plans to test retirement benefit payment files with the Treasury Department. In addition, in December 1998, OPM developed final draft business continuity and contingency plans to ensure that it can provide essential retirement and insurance services in January 2000, and will schedule and conduct testing of these plans within the next several months.

Department of Labor

The Unemployment Insurance (UI) program is administered by 53 State Employment Security Agencies (SESAs). The Department of Labor (DOL) is responsible for oversight of the UI program. The Year 2000 problem for UI arises in January 1999, because the State systems must calculate an end date for new claims. Since the end date is one year from the date a claim is filed, the computer must calculate and assign an end date in January 2000 for any new benefits claim opened in January 1999.

In December 1998, DOL stated that 16 SESAs were "at risk" of not being able to complete permanent fixes to their systems before the January 4, 1999 cutoff date, and may need to implement back-up, or contingency, plans so that benefits can be processed while they continue to prepare systems for the Year 2000. Those SESAs were: Arizona, Connecticut, Delaware, the District of Columbia, Hawaii, Illinois, Kansas, Louisiana, Massachusetts, Missouri, Montana, New Hampshire, New Mexico, Puerto Rico, Vermont, and the Virgin Islands. DOL is continuing to provide direct technical assistance to these SESAs in addressing the automated system problems and preparing contingency plans.

Reliance on Banks and the U.S. Postal Service

All of the benefit payment systems are dependent on the financial community for direct deposits and the U.S. Postal Service (USPS) for check delivery, and in the case of international payments, a variety of check delivery systems. Each Federal agency providing benefits is working closely with the Treasury Department and the Federal Reserve, which is in turn testing with the banking community to ensure a smooth transition to 2000 and to plan for any unforeseen disruptions to direct deposits.

With regard to check delivery through the U.S. mail, the USPS has renovated 78 percent of its mission-critical systems. The remaining renovation and independent verification and validation of all mission-critical systems will be completed in the first half of 1999. To evaluate the readiness of core mail processing equipment, the Postal Service advanced the dates and tested the automated mail

processing equipment at a major mail processing plant in Tampa and a bulk mail center in Atlanta. Both tests verified that the equipment, which is in use throughout the postal system, will process letters, flats and parcels correctly to and through the Year 2000. Although additional testing is planned throughout 1999, USPS is confident in its ability to sustain mail service through the century date change.

COMMUNICATIONS

(Working Group Chairs -- Federal Communications Commission, General Services Administration)

Information obtained from the communications industry indicates that the major companies have active Year 2000 programs and have made substantial progress toward updating their systems. However, less information is available regarding smaller organizations, and detailed information about some sectors will not be available until late January 1999.

The Federal Communications Commission (FCC) regulates the communications industry in five sectors: wireline, wireless, cable, broadcast, and international. Communications equipment is grouped by network elements (transmission and reception), support systems (billing, maintenance, inventory), and auxiliary systems (security, alarms, environmental control). Continuity of communications requires each network element to operate properly and for those elements to interoperate effectively.

The FCC is working closely with a number of organizations to assess industry readiness, including: the Network Reliability and Interoperability Council (NRIC), the Telco Year 2000 Forum, the Alliance for Industry Telecommunications Solutions (ATIS), Cable Television Laboratories, Inc. (CableLabs), the International Telecommunication Union (ITU), and several other trade associations representing various industry segments.

Wireline

Data indicate that this segment of the telecommunications industry, which includes major companies such as Bell Atlantic, AT&T and MCI, is seriously addressing Year 2000 conversion issues and will meet remediation goals. Based on the information collected to date, the most likely Y2K difficulties would be small, localized problems in the network. Companies are developing contingency plans to pool efforts to address these types of problems.

Preliminary information from the NRIC, based on a polling of companies representing 94 percent of the access lines in the United States, indicates that between September 30, 1998 and December 30, 1998, the wireline industry was expected to progress from 54 percent to 69 percent completion of its Y2K project overall, while assessment of Y2K problems would go from 94 percent to 98 percent complete, renovation or remediation would progress from 66 percent to 81 percent complete, and validation or testing would move from 58 percent to 69 percent complete. Implementing proven solutions across the network was expected to progress from 59 percent to 74 percent complete between the end of September and the end of December 1998. The average target date for complete implementation is June 30, 1999.

Cable

While current data are not yet available, the industry expects that Y2K problems will not cripple cable system operations, and at this time it appears that set-top boxes found in the common household are for the most part not at risk. However, switching devices, commercial insertion equipment, satellite video playback equipment, and addressable controllers could be affected. Cable operator equipment that relies on embedded chip technology is also at risk.

In April 1998, the Cable Services Bureau sent 25 letters to the 10 largest multiple systems operators (MSOs), 6 major manufacturers, 5 cable network programmers, and 4 trade associations. The 10 MSOs serve approximately 78 percent of the market share of subscribers. The manufacturers selected provide the most popular equipment used by cable operators and the trade organizations represent a cross-section of cable systems across the country. As of May 1998, all respondents had initiated an inventory phase of their Year 2000 programs, with the majority of the MSOs far along toward completing the review of their inventories. The responses indicated that cable systems had made minimal progress on remediation, unit testing, and integration. Nevertheless, several respondents stated that they will achieve Year 2000 compliance well ahead of the century date change. Further, CableLabs was expected to have begun interoperability testing before the end of 1998, and information regarding this testing will be available to cable operators at the CableLabs web site.

On November 25, 1998, the Cable Services Bureau sent a second round of Y2K assessments consisting of a questionnaire and associated attachments to a cross-section of 50 cable operators. Combined, these operators serve approximately 90 percent of all cable subscribers. Responses are expected by early January 1999.

Wireless

According to the industry, the majority of cellular and PCS phones are not date-sensitive. However, there could be problems in trunked systems or in other systems that integrate the cellular system into a larger network, such as public service answering points operated by local emergency response providers.

The Wireless Telecommunications Bureau sent a letter to licensees, associations, and other entities involved with wireless communications which provided Y2K information and made a voluntary request for information. The response to this voluntary inquiry has been insufficient to do an analysis. The current assessment questionnaire sent to the wireless industry is mandatory, covering 300 wireless carriers, and is meant to complement the information requested from the 1,200 wireline carriers about wireless services they may provide. Information from this assessment will provide a more comprehensive view of the industry and will be available in the first quarter of 1999.

The wireless industry is planning to participate in the interoperability testing planned by ATIS starting in January 1999.

Mass Media

It appears that the majority of broadcasters are aware of the Y2K issue and are addressing it. According to the industry, Y2K problems should not cause a loss of essential services because of the multiplicity of broadcast services as well as the fact that most equipment that could cause serious service outages is capable of being manually overridden.

The major broadcasting networks and group owners have been working on the Y2K problem for some time, some as early as 1996. Many broadcast groups and networks are working in teams and have formed reporting structures to ensure adequate project monitoring and risk assessment. The Mass Media Bureau recently sent a survey to a representative cross-section of 250 broadcasters that will yield additional information about the status of Y2K remediation efforts and contingency planning by mid-January 1999.

International

Telecommunications companies engaged in trans-border services indicate that neither dial tone nor data transmission are likely to experience significant difficulties resulting from the Y2K problem. Some companies report concerns about billing (operations/support systems) and maintenance systems. U.S. carriers indicate that terminating calls overseas, which depend on the networks of foreign Public Telephone Operators (PTOs), may be impeded by Y2K problems.

The ITU has a Y2K task force that has sent a questionnaire to more than 5,000 members -- governments, telecommunications carriers, and operators -- but there has been a low number of responses. Preliminary results showed that most of the respondents cited the British Standards Institute (BSI) as the standard to which their company is adhering. The countries that ranked themselves the least prepared were predominantly developing countries from the African continent, South Asia, and Southeast Asia. Eastern Europe, the Middle East, and Central and South American countries ranked themselves somewhat prepared for Y2K, while Western Europe, the United States, the Caribbean, and Pacific Rim countries ranked themselves the most prepared for Y2K. The ITU plans to redouble its efforts by circulating subsequent questionnaires on an ongoing basis to encourage governments to pressure operators to respond.

In addition, the ITU's Y2K inter-carrier task force is conducting testing and has developed plans for regional testing worldwide, which is expected to start in the first quarter of 1999. One test in early September 1998 among Germany, Sweden, and Hong Kong, showed few Y2K-related problems. However, each of the tested systems had undergone extensive remediation and testing.

Regarding satellite systems, the general consensus within the industry appears to be that the satellites themselves contain little, if any, date-sensitive information. However, satellite carriers are actively evaluating and remediating ground equipment because antenna controls are date and time dependent and ground stations contain complex electronics and larger computers. Companies are confident that they will complete conversion by January 1, 2000, but cite interoperability testing as difficult.

For more information, consult:

www.fcc.gov/year2000

ELECTRIC POWER

(Working Group Chair -- Department of Energy)

According to the most recent assessment information on Y2K preparations within the electric power industry, industry representatives believe that, with properly coordinated contingency planning and accelerated preparations, electric power supply and delivery systems will be able to operate reliably into the Year 2000.

In May 1998, the Secretary of Energy requested that the North American Electric Reliability Council (NERC) coordinate efforts within the electric power industry to assure a smooth Year 2000 transition. NERC is a voluntary, not-for-profit organization made up of 10 regional councils, whose membership includes nearly every major provider of electricity generation and transmission within the Eastern, Western, and Texas interconnections that form the backbone of the electricity supply system for the United States, Canada, and a small part of Mexico.

NERC has established recommended industry-wide milestones for ensuring that electric systems are ready for the Year 2000. The recommended completion dates for the remediation/testing phase of Y2K preparations is May 1999. Mission-critical systems and components (e.g., power production, energy management systems, telecommunications, substation controls and system protection, and distribution systems) are to be made Y2K ready by June 30, 1999.

NERC has worked in partnership with trade associations representing investor-owned utilities (Edison Electric Institute), municipal utilities (American Public Power Association), rural electric cooperatives (National Rural Electric Cooperatives Association), nuclear plant operators (Nuclear Energy Institute), and the Canadian electric power industry (Canadian Electricity Association) to assure the most complete coverage of the industry in the surveys and assessments.

In September 1998, NERC issued an initial status report and workplan for Year 2000 readiness within the electric power industry. NERC also committed that it would provide further reports on a quarterly basis with updated status information developed through monthly NERC surveys of the major generation and transmission providers (approximately 200 entities) and quarterly surveys of distribution-only entities (approximately 3,000 organizations) by cooperating trade associations.

Thus far, more than 75 percent of the electricity supply and delivery organizations have participated in the Y2K readiness surveys. Responses have been received from 188 of the entities surveyed directly by NERC and 2,200 entities surveyed by the cooperating trade associations.

As of October 1998, the overall progress of the 188 bulk electric system entities (i.e., large generation and transmission providers) that have reported to NERC was as follows:

Y2K Program Phase	Average % Complete	Average Projected Completion Date
Inventory	93	August 1998
Assessment	75	November 1998
Remediation/Testing	36	June 1999

The 188 reporting organizations, on average, plan for their systems to be Y2K ready by July 1999. Most of the 188 survey respondents are still in the early stages of formulating contingency plans and preparations.

The overall progress of the approximately 2,200 distribution entities that have responded to surveys through August 1998, was as follows:

Y2K Program Phase	Average % Complete
Inventory	86
Assessment	52
Remediation/Testing	30

The electric power industry is placing considerable emphasis on contingency planning for the Year 2000 transition. NERC is providing direct oversight with respect to operational Year 2000 contingency plans for the Eastern, Western, and Texas interconnections of the power grid. Contingency planning is also being implemented within each of the regional reliability councils, and at the level of individual suppliers. NERC is targeting June 1999 as the date for completion of contingency plans.

Particular concerns within the industry include the reliability of voice and data communications, needed for monitoring and control of power systems, and embedded chips.

Embedded chips are used in communications and numerous power system device controllers. While it is estimated that only 1 to 2 percent of these devices uses a time/date function in a manner that could result in a Y2K malfunction, the interconnected nature of electric systems make them sensitive to the failure of any equipment.

The next NERC status report and workplan for Year 2000 readiness is scheduled for release in mid-January 1999. NERC is also planning to conduct industry-wide Y2K preparedness drills in April and September 1999. All NERC reports, contingency planning guidance, and monthly survey results are available on the NERC web site.

For more information, consult:

www.nerc.com

EMERGENCY SERVICES

(Working Group Chair -- Federal Emergency Management Agency)

Initial assessment information on the emergency services sector indicates that a significant number of mission-critical systems are expected to be Y2K compliant by spring 1999. However, organizations are still working to obtain preliminary assessment information for areas such as the fire service and 911 centers. This preliminary information, along with more complete assessments, will be available as Federal agencies continue to receive feedback from their stakeholders in the emergency services community. In addition to the fire service and 911 centers, these entities include State and local emergency management organizations, emergency medical services, and other professional and private emergency management organizations.

Federal agencies working with the emergency services community include: the Federal Emergency Management Agency (for fire services and State and local emergency management); the Department of Transportation/National Highway Traffic Safety Administration (for emergency medical services); the Department of Health and Human Services (for the National Disaster Medical System and disaster medical assistance teams); the Department of Commerce/National Oceanic and Atmospheric Administration/National Weather Service; the Department of Interior; the United States Department of Agriculture and the Department of Defense. The American Red Cross is an honorary member.

Emergency Management Directors

As of December 1, 1998, emergency management directors from 46 States, the District of Columbia, and four territories had responded to a FEMA request for assessment information on Y2K readiness. FEMA had asked the directors to provide information on the status of State and local Y2K efforts, funding for Y2K fixes, overall readiness at the State and local level, contingency planning, and likely impacts of the Y2K problem.

Early responses indicate all State level agencies have resolved, or are planning to resolve, the vast number of Y2K-related issues involving critical emergency preparedness facilities, systems, and services. To date, nineteen States responded that they expect to be to be Y2K compliant by January 1, 2000. Of those, eight States said they expect to be compliant by mid-1999. Surveys are ongoing, and more information will be gathered throughout 1999.

Respondents did express several areas of concern. The issue cited most often was the limited nature of financial resources to assess, fix, test, and validate systems at the State level. Many respondents complained about the excessive number and redundancy of status reports requested on Y2K plans and preparedness. Respondents also expressed concerns about the possibility of power and grid failures, especially in areas serviced by smaller utilities. The limited amount of contingency planning that has

been completed at the State and local level was also noted.

The International Association of Emergency Managers, which has a membership of over 1,700 individuals representing local emergency management organizations, conducted an on-line survey of Y2K preparedness. Of the 172 respondents, 164 are aware of the Y2K problem, 159 are actively working to ensure their systems will be ready for the Year 2000, and 59, or 34 percent, reported their systems are fully prepared. Furthermore, 58 percent of the respondents reported that internal systems for their community emergency management programs are Y2K compliant, and 54 percent reported that their organizations are capable of meeting community needs (information, guidance, assistance) for Y2K preparedness.

Fire Service

An initial assessment of fire service Y2K efforts is expected by early 1999. FEMA's United States Fire Administration (USFA), which acts as a clearinghouse for Y2K information, is working with the National Association of State Fire Marshals (NASFM) to survey 500 representative fire departments across all 50 States. The USFA has already distributed a brochure of frequently asked questions regarding the Y2K problem to 33,000 individual fire departments, 50 State fire marshals, 50 State fire training directors, 11 major national fire service organizations, and eight national associations of manufacturers/distributors of fire and emergency services equipment.

"911" Centers

An initial assessment of Y2K progress among 911 centers is expected by early 1999. In partnership with the USFA, the National Emergency Number Association (NENA) planned to contact all 4,300 known 911 centers by the end of 1998 to assess Y2K readiness. The FCC is also working with NENA, since local 911 centers are dependent upon the commercial communications companies to address and resolve Y2K issues.

Emergency Medical Services

While the assessment of State and local Emergency Medical Service (EMS) agencies is ongoing, 75 percent of State EMS directors reported that their systems would be 100 percent compliant by January 1, 2000, in response to a National Highway and Transportation Safety Administration survey. The National Association of State EMS Directors has agreed to coordinate a State-by-State assessment of preparation and compliance among local EMS agencies.

According to the Department of Health and Human Services (HHS), the pre-hospital segment (e.g., ambulance services) of the health services sector should have minimal Y2K concerns about internal systems. There are no internal Y2K issues affecting systems for deploying ambulances, helicopters, and communications and transportation equipment, given an operational support infrastructure. The 62 Disaster Medical Assistance and Specialty Teams, comprising 7,000 enrolled personnel and their equipment cache, will be unaffected.

HHS is conducting Y2K outreach programs with health care organizations, including the American Hospital Association, American Medical Association, and Joint Commission on Accreditation of Health Care Organizations. HHS also is working with other Federal agencies and manufacturers of biomedical equipment to ensure compliance of medical devices. As of October 1998, approximately two-thirds of the 1,932 manufacturers of medical devices containing electronic components have

responded to queries about the compliance of their products. This information is available on a Food and Drug Administration-maintained web site (*www.fda.gov/cdrh/yr200/year2000.html*).

Federal Response Planning

Virtually all of the Federal Response Plan (FRP) Primary Agencies -- the Departments of Transportation, Defense, Agriculture, and Energy, HHS, FEMA, NCS, GSA, and the Environmental Protection Agency -- stated that they expect their mission-critical systems used for emergency response under the FRP to meet the March 31, 1999 government-wide goal for Year 2000 compliance. The American Red Cross expects its critical FRP systems to be compliant by July 31, 1999.

Each of the Primary FRP Agencies is a member of the Catastrophic Disaster Response Group (CDRG), which is chaired by FEMA and is responsible for providing national policy-level direction on interagency disaster planning, coordination, and operations. In July 1998, FEMA established a Primary Agency Committee of the CDRG to ensure that all 26 FRP agencies are Y2K-ready and able to perform effective disaster response operations, and to prepare for possible consequences of Y2K failures that may require a Federal response.

For more information, consult:

www.fema.gov/y2k/

FINANCIAL SERVICES

(Working Group Chair -- Federal Reserve Board)

According to the latest data from Federal supervisory agencies, financial institutions are well ahead of most organizations in preparing systems for the Year 2000. Banks, credit unions, and the futures and securities industries are far into the Y2K remediation process and expect that systems will be ready in advance of the new millennium. Moreover, the Federal Reserve is making good progress on its internal systems and reports that external tests with banks and other financial institutions are going well.

A large proportion of institutions that make up the financial sector are supervised by one or more Federal regulatory agencies -- primarily the Federal Deposit Insurance Corporation (FDIC), the Federal Reserve, the National Credit Union Administration (NCUA), the Office of the Comptroller of the Currency (OCC), the Office of Thrift Supervision (OTS), the Commodities Futures Trading Commission (CFTC), and the Securities Exchange Commission (SEC). Assessment information is derived largely from supervisory data collected by these agencies.

Depository Institutions and Credit Unions

The vast majority of the Nation's depository institutions and credit unions (approximately 9,000 banks, 1,200 thrift institutions, and 13,000 credit unions) are on schedule to meet the Federal Financial Institutions Examinations Council (FFIEC) milestone dates for completing Year 2000 remediation efforts. The FFIEC's remaining milestones for completing the validation and implementation of

mission-critical systems include: (1) by December 31, 1998, testing of internal mission-critical systems should be substantially complete; (2) by March 31, 1999, testing by institutions relying on service providers for mission-critical systems should be substantially complete and external testing with material other third parties should have begun; and, (3) by June 30, 1999, testing of mission-critical systems should be complete and implementation should be substantially complete. With respect to Year 2000 contingency planning, the FFIEC has established June 30, 1999, as the date by which all institutions should have substantially completed their Year 2000 business resumption contingency plans.

Depository institutions and credit unions largely have completed the awareness and assessment phases, renovations continue, and most are now testing mission-critical systems as part of validation phase efforts. As of October 31, 1998, approximately 96 percent of depository institutions and credit unions examined by the FFIEC agencies were rated satisfactory (i.e., have met or are expected to meet all FFIEC expectations and timeframes).

Securities Industry

The securities markets and industry are making good progress with their Year 2000 efforts, and reporting procedures are in place to identify any material weaknesses in remediation efforts.

The SEC is responsible for oversight of U.S. securities markets and clearing agencies. In September 1998, the SEC surveyed eight national securities exchanges, the National Association of Securities Dealers (NASD), the Securities Industry Association (SIAC) (as systems manager for the National Market System) and nine registered or exempt clearing agencies regarding their Year 2000 efforts. According to the latest survey data, the exchanges and NASD have completed remediation and testing work on 95 percent of mission-critical systems and have finished implementation work on 73 percent. The clearing agencies have completed renovation and testing on 87 percent of critical systems and implementation on 86 percent.

Broker-dealers are subject to oversight, including examinations, by the SEC and securities self-regulatory organizations (SROs) such as the NASD and the New York Stock Exchange. The SEC required registered broker-dealers to file reports regarding their Year 2000 efforts on August 31, 1998 and a second report is due on April 30, 1999. According to the data, 83 percent of broker dealer firms have a written Y2K plan. Thirty percent have completed testing on critical systems, and 51 percent have developed contingency plans for potential Y2K failures. In July 1998, the Securities Industries Association conducted beta testing of interconnections between a select number of systems within the industry. The test, which identified only a few easily-correctable Year 2000 errors, was a prelude to a more extensive street-wide test to be conducted in spring 1999.

The SEC also conducts examinations of registered investment companies and investment advisers. As of September 30, 1998, the SEC had conducted Year 2000 reviews of 3,895 investment advisers and 445 investment companies. Of the investment companies, 76 percent reported having a written Y2K plan, and 50 percent of investment advisors reported having such plans. The SEC's reports that 24 percent of the investment companies and investment advisers examined have completed implementation. An additional 56 percent expected to complete implementation by December 31, 1998.

Commodities Futures Industry

The futures industry is preparing its systems for the Year 2000, subject to CFTC oversight. Testing by the futures exchanges and their clearinghouses is progressing on schedule and internal remediation work is complete, or nearing completion, at many firms and SROs. Many futures commission merchants (FCMs) use computer service providers, who report that their systems are compliant.

A Futures Industry Association (FIA) report on the September 1998 Y2K beta testing at futures exchanges indicates that of over 4000 transactions processed, 98 percent were considered successful, and the errors identified were promptly resolved.

FCMs who clear on exchanges are required conduct Y2K tests of their systems. Non-clearing FCMs are less likely to pose systemic risks. However, the responses to the Y2K questionnaires sent out by the SROs indicate an overall awareness of the potential Y2K problems among non-clearing FCMs. Most have begun work on assessing their Y2K compliance through testing their own systems and confirming compliance of systems and data supplied by outside parties.

More than 500 of the 1500 commodity pool operators (CPO) and commodity trading advisors (CTA) use "back-office" service (i.e., accounting and processing services) providers. Approximately 15 firms provide back office services to CPOs and CTAs. The National Futures Association (NFA), an SRO, has contacted most of these firms, all of whom have Y2K projects underway with completion dates ranging from October 1998 to mid-1999.

Federal Reserve Year 2000 Readiness Disclosure Statement

The Federal Reserve provides financial services to depository institutions as well as to the federal government. The Federal Reserve has met its goals to date for addressing the risks posed by the century date change. The Federal Reserve System's internal application testing efforts are progressing in a timely manner. As of the end of November 1998, 67 percent of the Federal Reserve's mission-critical applications were Year 2000 ready. Of the remaining 33 percent, 31 percent are remediated and being tested, and the Federal Reserve expects that implementation will be completed by January 1999. The remaining two percent represent new system development initiatives that are on schedule for implementation in first quarter 1999.

External testing with financial institutions and other customers is going well. As of December 1, 1998, over 5,000 depository institutions had tested with the Federal Reserve, and the Treasury Department's Financial Management Service has conducted interface testing with the Federal Reserve for Social Security payments.

Insurance Sector

Based on information collected by the National Association of Insurance Commissioners (NAIC), all States have initiated a survey/examination effort for domestic insurers. As of December 1998, 64 percent of regulated insurance entities responded to the survey and State regulators are following up with insurers that did not respond. The focus for 1999 reviews will be completion of the testing, remediation and implementation phases, and contingency planning. The States have established June 30, 1999 as the date by which remediation of all mission-critical systems should be complete.

OIL AND GAS

(Working Group Chair -- Federal Energy Regulatory Commission)

Industry representatives are cautiously optimistic that the U.S. oil and gas sector will be ready for the transition to the new millennium. Survey results indicate that the industry is making good progress in implementing Y2K plans, but that the rate of progress needs to increase.

Industry trade associations and individual companies have been addressing the Y2K issue for some time. Many companies began as early as 1995. Preparations for Year 2000 are a natural extension of the industry's thorough contingency planning that covers every area of operations from producing fields to refinery and pipeline operations to environmental monitoring and control. For example, storage built into oil and natural gas delivery systems provides additional flexibility for delivering the product to end users should Y2K-related disruptions occur.

Date handling codes show up within various computer applications and are embedded in computer chips and throughout the petroleum industry, from computer applications to process control devices. Potential Y2K problems range from incorrect financial transactions, oil field production outages, refinery and pipeline stoppages, product flow disruptions, as well as potential environmental and safety hazards.

Areas of concern include Supervisory Control Area Data Acquisition Systems (SCADA) used to acquire information from remote sections of pipeline and to control the flow of fuel at remote locations by using computers linked to satellite and telephone communications systems. Embedded chips, which occur throughout the sector, are also a concern. Following an initial focus on software, the industry is now concentrating on embedded chips, which are more prevalent in operations.

The Oil and Gas Working Group of the President's Council, in cooperation with the American Petroleum Institute, the Interstate Natural Gas Association of America, the American Gas Association, the American Public Gas Association, and other industry groups, conducted its first survey on the Y2K readiness of the U.S. oil and gas industry in August 1998. Survey results were presented at a public conference in September 1998, and are displayed on the Internet at www.y2k.gov. The survey respondents represented 45 percent of U.S. oil and natural gas production, 78 percent of U.S. refining capacity, 70 percent of U.S. crude oil and refined product pipeline deliveries, 81 percent of natural gas interstate pipeline deliveries, 43 percent of U.S. branded retail outlets (e.g., service stations), and 50 percent of the total natural gas volume of investor-owned local distribution companies.

According to the August 1998 data, about 86 percent of survey respondents were in the process of implementing plans for addressing the Y2K problem, with 14 percent still in the planning stage.

The status of work was broken down as follows:

Business Systems and Associated Software		Embedded Systems	
Phase	*Aggregate Results*	*Phase*	*Aggregate Results*
Plan	14%	Plan	14%
Inventory	12%	Inventory	18%
Assessment	19%	Assessment	28%
Remediation	36%	Remediation	26%
Validation	19%	Validation	14%

Twenty-two percent of survey respondents expected to complete their Y2K work by December 1998; 76 percent expected to be done by June 1999; and all expected to be done by December 1999.

Survey respondents reported that they would complete in the remediation and validation phases their contingency planning efforts for internal and external failures. All respondents said that their contingency plans would be ready by December 1999, with 31 percent stating these plans would be complete by December 1998, 73 percent expecting completion by June 1999, and all expected to be completed by December 1999.

The next survey was distributed in mid-December 1998, with a due date of mid-January 1999. The Oil and Gas Working Group will release the survey results at a public conference to be held on February 18, 1999. Quarterly follow-up surveys will be conducted during 1999.

The U.S. oil and gas industry is concerned about international oil production and shipping, especially in light of the lack of information available. Members of the American Petroleum Institute's International Oil Y2K Task Force have joined with the Federal Energy Regulatory Commission (FERC) and other Federal agencies, along with the International Energy Agency, to create an International Oil Coordination Council (IOCC). IOCC met in early November 1998 to exchange information on industry and government efforts and plan how to assess the industry's Y2K readiness on an international scale. IOCC will focus on collecting information globally in 1999 and on creating a public scorecard of international readiness.

SOLID WASTE

(Working Group Chair -- Environmental Protection Agency)

Waste industry organizations, which include waste haulers, handlers, and disposers, use a relatively

low level of automation in their operations. As a result, the industry reports that waste organizations' exposure to Y2K-related difficulties will be minimal.

Nonetheless, the Environmental Protection Agency's Office of Solid Waste has been communicating with the waste management sector about the potential risks of Year 2000 failures. EPA has encouraged its contacts to identify, assess, manage, and mitigate Y2K risks within the industry.

Organizations and associations with whom EPA has been communicating include: the Association of Waste and Hazardous Materials Transporters, Browning-Ferris Industries, Inc. (BFI), the Cement Kiln Recycling Coalition, Environmental Industry Associations, the Environmental Technology Council, the Integrated Waste Services Association, Inc., the National Association of Chemical Recyclers, the Solid Waste Association of North America, and USA Waste Services Inc./Waste Management Inc.

Thus far, only the Cement Kiln Recycling Coalition has a conducted a formal Y2K survey of its members and expects to release the results in late January 1999. In the first quarter of 1999, EPA plans to work with waste trade associations including the Solid Waste Association of North America, which includes major trash haulers like BFI, Inc. and Waste USA, on their Y2K efforts.

EPA's contacts with the industry have yielded some important information on the Y2K problem and waste operations. BFI, Inc., which owns nearly 40 percent of U.S. collection and operating waste facilities, reports that there is little vulnerability related to the Y2K problem in the provision of waste collection services, and ranks internal operating (e.g., scales) and billing systems as the areas of most concern. At incineration plants, early precautions may automatically be activated to avoid problems with emission monitors or other internal systems.

Given the relatively low level of automation inherent in trash collection, hauling, and disposal, contingency planning within the industry is not expected to be highly sophisticated. Industry representatives have indicated that should Y2K disruptions occur within the industry, waste will be held longer and not disposed of or incinerated until system fixes are made.

For more information, consult:

www.epa.gov/year2000

TRANSPORTATION

(Working Group Chair -- Department of Transportation)

Preliminary survey data and contacts with transportation industries indicate that there is a high level of awareness of the Y2K problem across the major air carrier and transit service providers, as well as in the motor vehicle regulatory and enforcement arena. Air carriers and larger airports and transit providers are making significant progress in efforts to address the Y2K problem. However, the potential readiness of airports and transit services in small communities and rural areas is a concern. Additional data is necessary to provide a more comprehensive understanding of the level of Y2K readiness among all components of the transportation industry.

Neither the railroad nor maritime industry associations had complete, consolidated survey data to share in time for this report, but this information is expected early in 1999. Based on external reports and outreach efforts, it appears that the rail industry is taking appropriate steps to prepare for the Y2K

conversion. Concerns about the readiness of the international maritime transportation industry, however, has prompted the U.S. Coast Guard to begin an effort with the International Maritime Organization to improve information sharing and accelerate global Y2K remediation efforts and contingency planning of the maritime transportation industry. Information sharing is taking place through the Ship Operations Cooperative Program (SOCP), a joint venture with industry, and the SOCP Y2K website.

In November 1998, the Council's Transportation Working Group sent a letter and sample Y2K assessment form to the heads of 83 key trade associations representing all modes of transportation -- air, highway, transit, rail, and marine. Thus far, the National Air Carrier Association, Inc. (NACA), American Association of Motor Vehicle Administrators (AAMVA), and the American Public Transit Association (APTA) have provided assessment information on their members' Y2K efforts.

Air

The Transportation Working Group is eagerly awaiting the results of the Air Transport Association survey that will cover the larger commercial carriers, including the major passenger

airlines. Results from this survey, and from airport-related surveys, are expected within the first quarter of 1999.

NACA represents a relatively small segment of the air carrier market, specializing in low-cost scheduled and charter transportation of passengers and cargo. NACA surveyed its member airlines in November 1998; five of seven members responded. The level of Y2K readiness varies across NACA's membership. Some of the smaller carriers are very far behind in the work phases, with only 55 percent of assessment completed. Larger carriers have made more progress. Estimated costs for Y2K remediation among the carriers ranged from around $200,000 to $8 million. The survey results also indicate that not all contingency plans address external failures.

Respondents reported that they do not currently have plans to suspend flights to countries lagging behind the United States in dealing with the Y2K problem, although they are closely monitoring the international situation. NACA indicated a willingness to conduct additional surveys of their members' Y2K readiness in 1999.

Highway

AAMVA, an international association representing motor vehicle and traffic law enforcement administrators from jurisdictions within the United States and Canada, surveyed its members in August 1998, receiving 44 responses representing 31 States. Forty-seven percent of respondents said the Y2K issue was a "top priority" for their organization, while 36 percent ranked it as "very high" or "high," and 9 percent as "medium" or "low." On system compliance, 34 percent reported that they were Y2K compliant; 59 percent said they were assessing the issue or had at least one Y2K project planned or underway.

Respondents cited five functional areas of motor carrier operations -- safety administration, registration, fuel tax, operating authority, and oversize/overweight permits -- as being vulnerable to the Y2K problem. Target dates given for expected compliance of these areas range from November 1998 to October 1999. More than 60 percent of respondents were fully confident that their jurisdiction would be compliant prior to January 1, 2000, another 36 percent fell between 80 and 99.9 percent

confident.

On contingency planning, 48 percent of respondents do not have contingency plans, while 32 percent do. Slightly more than half of those without contingency plans do not intend to prepare them. Contingency actions included manual procedures; back-up, parallel systems operation; and upgrading current system software.

Transit

According to a May 1998 APTA survey of over 320 major transit providers and suppliers (e.g., rail, bus) 92 percent of the 162 respondents have begun Y2K reprogramming efforts. One-fifth of respondents reported that their systems were fully compliant. Overall, 79 percent of all respondents indicated systems would be Y2K compliant by end of 1999; 21 percent were not fully confident about meeting that deadline.

Survey data indicate that 47 percent of respondents expect no problems managing Federal Transit Administration (FTA) grants; 8 percent expect problems; and 45 percent were unsure. In its analysis of the survey results, APTA suggested that technical assistance from FTA would be necessary to help transit systems become Y2K compliant. FTA has since worked with APTA to conduct Y2K informational seminars at APTA's annual meeting in October 1998, and is planning a January 1999 Y2K conference to be co-sponsored by the Federal Railroad Administration.

For more information, consult:

www.y2ktransport.dot.gov

www.dot.gov

WATER SUPPLY

(Working Group Chair -- Environmental Protection Agency)

The most recent survey data indicates that a majority of public water system representatives do not expect the Y2K problem to interrupt water services. Most public water systems can be operated using manual controls, and sufficient environmental protections can be maintained while the system is run in such a manner. However, data indicate that system operators have concerns about their exposure to external system failures.

Drinking Water

In September 1998, the American Water Works Association (AWWA), the Association of Metropolitan Water Agencies (AMWA) and the National Rural Water Association (NAWC) issued a preliminary report on the Year 2000 readiness of community public water systems. Together, AWWA, AMWA and NAWC represent approximately 4,000 public water systems which provide services to 80 percent of the U.S. population.

According to the preliminary data, gathered in the summer of 1998 from more than 600 respondents to a survey on Y2K readiness, large water systems (serving more than 1 million people) expect minimal internal problems related to the century date change. Among operators of medium to large-size systems (serving more than 100,000 people), 86 percent expect their internal systems will be Y2K compliant by January 1, 2000. However, the data also suggest that few system operators have assessed possible exposure to Y2K problems from failures in systems of outside service providers (e.g., telecommunications, power, chemical suppliers).

Sixty-one percent of respondents have a formal Y2K plan; 36 percent have no plan; and 3 percent responded "do not know." One half of the respondents said that they had completed their assessment of internal systems, 42 percent said they have not and 8 percent responded that they do not know. Only 25 percent of respondents said they had completed an assessment of external systems.

More than three-fourths (81 percent) of water system operators expect that their Y2K work on their internal systems will be completed by January 1, 2000. A smaller number (63 percent) expect that work on external systems will be completed by that date.

On contingency planning, most public water systems have back-up plans for natural disasters (e.g., hurricanes, earthquakes), but it is unclear whether system operators have expanded these plans to account for potential Y2K-related failures. At the time of the original survey, 22 percent of respondents said that they had completed contingency plans for the Y2K failures in internal systems, and a smaller number (12 percent) said that they had completed such plans for external system failures. A more extensive report is scheduled for release in March 1999.

Wastewater

In June 1998, the Association of Metropolitan Sewerage Agencies (AMSA), a coalition of over 2,000 of the Nation's publicly owned wastewater treatment agencies, conducted a survey of Y2K preparedness in the area of wastewater treatment. The survey focused on Year 2000 problem evaluation, estimated repair costs, repair status, impacts of potential system failures and contingency planning efforts.

Only 54 percent of the responding facilities are automated. According to AMSA, 90 percent of respondents said they have implemented plans for addressing the Y2K problem and completed the assessment of all computer-related systems. Ninety-five percent have begun to implement solutions for systems that demonstrated some kind of Y2K failure during the assessment phase. More than one quarter of respondents (26 percent) stated that they were almost done with their remediation efforts.

On contingency planning, 55 percent report having a back-up plan for possible Year 2000 failures -- most involving manual operations. Water trade association representatives have indicated that, should computer failures or any type of dislocation arise on January 1, 2000, industry-wide contingency planning calls for conversion to manual operations. However, 15 percent of respondents reported concerns about manual operations and possible environmental compliance issues.

A follow-up survey was scheduled for December 1998 that will gather further information about contingency plans and the effects of Year 2000 failures among external service providers (e.g., power, telecommunications, chemical vendors). Results are expected early in 1999.

For more information, consult:

www.epa.gov/year2000

III. OTHER AREAS

Federal Government

The Federal Government operates some of the largest, most complex computer systems in the world that provide services to millions of Americans. The Health Care Financing Administration (HCFA), for example, processes roughly 1 billion Medicare transactions each year, worth more than $ 210 billion in fiscal 1997. The Government also exchanges data electronically with the States, which administer key Federal programs such as Food Stamps, Medicaid, and unemployment insurance.

Preparing Federal systems for the Year 2000 is an enormous challenge, and agencies have mounted aggressive efforts to ensure that critical services will not be disrupted by the transition to the new millennium. The first interagency task force dealing with the Y2K problem was created three years ago. Since late 1996, Federal agencies have been required to report quarterly to the Office of Management and Budget (OMB) and Congress on their progress to assess, remediate, test, and implement mission-critical systems against a government-wide goal of having all critical systems Y2K compliant by March 31, 1999.

According to the most recent OMB report, as of November 15, 1998, 61 percent of Federal critical systems were compliant, up from 27 percent a year earlier. The November data also indicated that 90 percent of critical systems requiring repair have already been fixed and are now being tested. A small percentage of critical systems are not expected to meet the March goal, and agencies will produce specific benchmarks for completing work on these systems before January 1, 2000. All agencies are working to develop contingency plans in the event of internal or external failures.

Agencies receiving high marks from OMB for their progress include the Small Business Administration, the first agency to report that 100 percent of its critical systems are now compliant, the Social Security Administration, the Department of Veterans Affairs, and the Environmental Protection Agency.

According to OMB, agencies that continue to face significant challenges include the Departments of Defense, which operates more than one-third of the Government's critical systems, Energy, Health and Human Services, State, Transportation, and the Agency for International Development. The following descriptions of Y2K challenges at these agencies are excerpted from the most recent OMB report.

Defense. The Defense Department continues to make progress in addressing its massive Y2K problem (percentage of Y2K compliant critical systems rose to 53 percent from 42 percent in August 1998), albeit at a rate too slow to meet the March 1999 goal. As a result, the Secretary and Deputy Secretary have taken a number of actions to accelerate the Department's progress toward Y2K compliance, including requiring commanders and service chiefs to personally certify the Y2K status of each major information system, and withholding funding for non-Y2K work on information systems unless and

until military departments demonstrate Y2K progress.

Energy. Compliance increased from 40 percent to 50 percent in the last quarter, and progress has been made in the other phases. The Department, however, has not completed its renovation work, finishing renovation on 88 percent of its critical systems. Likewise, the Department has completed validation on only 53 percent of its critical systems. The Department's CIO is conducting site compliance reviews in cooperation with the Office of the Inspector General and Office of Oversight. The compliance reviews have increased awareness of the severity of the problem and the need for high-level management attention.

Health and Human Services. HCFA has made significant progress on renovating its internal and external systems. However, HCFA remains a serious concern due to potential hurdles in external system remediation and high contingency cost estimates. Medicare contractors will have to make an intensive, sustained effort to complete validation and implementation of their mission critical systems by the government-wide goal of March 31, 1999.

State. The State Department faces a significant challenge in simultaneously managing its complex Y2K project and completely replacing information systems installed around the world. The Department has obtained additional contractor support to address two key concerns: overall Y2K program management and technical "strike force" expertise to assist in problem areas. While the Department remains behind government-wide goals for renovation of systems and overall compliance, results are improving.

Transportation. The Transportation Department improved management oversight, combined with an accelerating rate at which the Federal Aviation Administration (FAA) is remediating air traffic control system components, is significantly mitigating risk. As of mid-November 1998, the Department-wide percentage of critical systems renovated stood at 95 percent, a significant improvement over the 64 percent reported in the previous quarter. However, with only 31 percent of its critical systems validated and 21 percent implemented, the Department continues to lag behind the government-wide schedule.

Agency for International Development (AID). The next months will be critical as AID faces many challenges in repairing its remaining four complex critical systems. AID has, however, completed renovation of two systems and has begun the certification process. AID continues to make management improvements and has retained several contractors to assist project management including performing independent validation and verification of contractor deliverables. Renovation of AID's most important system is underway, including development of standard date/time processing functions and line-by-line assessment of the system.

For more information on the Government's progress in preparing critical Federal systems for the Year 2000, consult the Council's web site (www.y2k.gov).

State and Local Government

Americans rely upon State and local governments for many important services, from unemployment

insurance to water treatment and emergency services. The vast majority of these services rely upon automated processes that are at risk of experiencing Year 2000-related failures.

Progress among State governments in addressing the Year 2000 problem varies. According to a National Association of State Information Resource Executives (NASIRE) survey of State Y2K remediation efforts, several States report that they have completed Y2K work on more than 70 percent of their systems. But a handful of States still have much work left to do, reporting that they haven't yet completed work on any of their critical systems. Virtually every State, however, has an organized Y2K program in place, often led by a designated State Y2K Coordinator.

Local governments are a more serious concern. At the local level, many towns, cities, and counties are aggressively attacking the problem and are making good progress, but a significant number are not sufficiently organized to prepare critical systems for the new millennium. According to a December 1998 National Association of Counties survey of 500 counties representing 46 States, roughly half of counties do not have a county wide plan for addressing Year 2000 conversion issues. Almost two-thirds of respondents have not yet completed the assessment phase of their Year 2000 work. The survey also found that, in general, Year 2000 efforts among larger counties are more advanced than their smaller counterparts.

The Council has been working with the White House Office of Intergovernmental Affairs and key groups like the National Governors Association, NASIRE, the National Association of Counties, and the National League of Cities to promote action on the problem among State and local governments. In July 1998, Council members participated in a two-day National Governors' Association Y2K conference with Year 2000 coordinators from 45 States. The Council Chair participates in monthly conference calls with State Year 2000 executives to discuss cooperative efforts between the Federal Government and the States and how States can help each other to address Y2K challenges.

Federal agencies are also actively working with the States to ensure that Federal-State data exchanges used to carry out important programs such as Food Stamps and Medicaid will be ready for the Year 2000. Most Federal agencies and States have now inventoried all of their data exchange points and are exchanging information with one another to ensure the exchanges will function in the Year 2000. However, as of the last OMB quarterly report, three States had not yet provided any information on the status of their data exchange activities. For the February 1999 quarterly report, OMB has asked Federal agencies to provide assessment information, for each State, of Y2K progress on State-administered Federal programs.

One State-administered Federal program, Unemployment Insurance (UI), has a unique Y2K failure horizon date of January 4, 1999. UI systems look forward one year to calculate a beneficiary's UI entitlement which means that, in the first week of January 1999, these systems must be able to process dates in January 2000. States that do not yet have Year 2000 compliant systems have had to implement temporary back-up, or contingency, plans until permanent fixes are completed. The Labor Department is working with the States and territories that have implemented such plans and is confident that benefit payments will continue. This work demonstrates the importance to every organization of having an adequate contingency plan. The UI experience also illustrates the fact that a Year 2000 failure does not have to mean that a program will stop functioning.

Small and Medium-Sized Businesses

The status of Year 2000 efforts among the Nation's 24 million small and medium-sized businesses is an ongoing concern. Most of these businesses do not have a vast number of information technology systems, but, like large companies, they too need to assess how the Year 2000 problem could impact their operations. Many small and medium-sized businesses are taking steps to address the problem and to ensure not only that their own systems are compliant but that those they depend upon are ready for the Year 2000 as well. But a significant number of these businesses are not preparing their systems for the new millennium.

A recent National Federation of Independent Business survey, released in January 1999, indicates that as many as a third of small businesses using computers or other at-risk devices have no plans to assess their exposure to the Y2K problem. The survey also indicates that more than half of small firms have not yet taken any defensive steps. The reasons for this inactivity vary. Many of these business owners believe that, unless they operate large, mainframe computers, the Y2K problem poses no threat to their operations. Others have stated that they will fix systems when and if they fail, and that taking preemptive action to assess and fix potential Y2K problems is a waste of time and money.

The Small Business Administration (SBA) has mounted an aggressive outreach program to increase awareness and promote action on the problem among small and medium-sized businesses. SBA is distributing, through its web site (*www.sba.gov/y2k*) and other outlets, information about how businesses can assess their exposure to the Year 2000 problem and prepare their systems for the new millennium.

SBA has enlisted the support of private sector organizations in its efforts to reach small and medium-sized businesses with information on the Y2K problem. National industry trade associations, such as the American Bankers Association and the American Insurance Association, have distributed SBA Y2K information to their members and encouraged them to share it with their clients. The Bank of America, Wells Fargo, and other major banks have distributed an SBA Y2K "bill stuffer" flyer to their business customers. And power companies, like Maine Electric and the Potomac Electric Power Company, have also distributed SBA information to their customers.

In October 1998, the Council joined the SBA, the Commerce Department, and other Federal agencies in launching "National Y2K Action Week," to encourage small and medium-sized businesses to take action on the Y2K problem. The week was built around more than 300 Y2K educational events for small and medium-sized business managers held at Federal agency field offices across the country. Materials promoting the Week appeared in the Nation's post offices and the Council ran advertisements in 250 newspapers listing the names of more than 160 national trade associations committed to encouraging their members to meet the Year 2000 challenge.

International Activities

International activities is the area for which there is the least amount of information. The State Department and other agencies on the Council's International Relations Working Group has been working with U.S. embassies and other organizations around the world in an effort to gather Y2K information on a country-by-country basis.

Based on the available information, it is clear that although more countries have recently begun to

focus on the Year 2000 problem, most are significantly behind the United States in efforts to prepare critical systems for the new millennium. Awareness remains especially low among developing countries. Lack of progress on the international front may lead to failures that could affect the United States, especially in areas that rely upon cross-border networks such as finance, telecommunications, and transportation.

The United States is working to encourage other nations to take action on the problem and to facilitate coordination of country Y2K efforts on a regional and international basis. The U.S. worked closely with the United Nations to organize the first-ever meeting of national Year 2000 coordinators from over 120 countries on December 11, 1998. Delegates to the meeting discussed Y2K challenges in key infrastructure areas and agreed to work together regionally to share information on their Y2K remediation and contingency planning. The U.S., along with several other nations that helped to organize the meeting, will also work to create an international coordinating center to help support these efforts in the coming months.

The U.S. has also forged bilateral cooperative agreements on the Y2K challenge with several nations, including Japan, South Korea, Canada, and Mexico. Under these agreements, U.S. authorities are working with their counterparts in other countries to exchange information on Y2K efforts in key areas such as power, transportation, customs, telecommunications, finance, and health care.

The Council Chair has met with numerous international organizations like the Organization of American States, the OECD, the World Bank, and the International Monetary Fund to enlist their support in encouraging their members to take action on the problem. To assist developing countries, the U.S. is working with the World Bank to support its program of increasing awareness of the problem among developing countries through a series of international conferences on the issue.

National security is a serious concern. It is important to note that the Y2K problem will not cause nuclear weapons to fire automatically; they require some form of human intervention for launch. The Department of Defense (DOD) has been reaching out to other countries to ensure that they too are taking appropriate action to secure the readiness of their defense systems. DOD representatives have met with NATO to discuss Y2K progress on NATO support systems and infrastructure. DOD has also worked, along with defense representatives from the United Kingdom and Canada, to form an Allied Y2K Coordination Committee which has enabled DOD to meet with defense representatives from Germany, New Zealand, the Netherlands, France, and Australia. DOD has also met separately with representatives from Russia, Poland, the Czech Republic and Hungary to discuss Y2K efforts for their defense systems.

Over the coming year, the Council will continue to focus its energies on key areas of concern in our increasingly interconnected and interdependent world.

APPENDIX: OTHER WORKING GROUP ACTIVITIES

Building Operations

(Working Group Chairs -- Department of Housing and Urban Development, General Services Administration)

The Buildings and Housing Working Group is working with the International Facilities Management Association (IFMA) and the International Buildings Operations and Management Association (BOMA) to ascertain the Y2K status of common building systems (e.g., elevators, climate control systems, security systems). IFMA and BOMA are conducting a survey of their membership that is expected to produce a detailed assessment in late March 1999.

The General Services Administration (GSA), chair of the working group, has found that 98 percent of systems in its buildings are Y2K compliant. GSA also reports that its systems can be manually operated if necessary.

Specific information on building product compliance and contingency planning is available on the World Wide Web through *www.y2k.gov* or through *www.gsa.gov*.

Consumer Affairs

(Working Group Chair -- Federal Trade Commission)

The Consumer Affairs Working Group, chaired by the Federal Trade Commission (FTC), is assessing the Y2K compliance of consumer products and financial services. The group is also conducting a broad-based education initiative to make Y2K information available to consumers through the Internet and a toll-free information line.

The Y2K consumer education initiative covers 85 separate topic areas ranging from product safety to health care to money. Information is made available to consumers through a collection of links to government agencies, trade associations, and private companies posted to the *www.consumer.gov* website, and through the toll-free 1-888-USA-4-Y2K information line.

The fifty largest companies in the consumer financial services industry engaged in direct credit lending to consumers and/or retail credit make up 90 percent of the consumer finance industry and report, through their trade association, the American Financial Services Association, that 90 percent of their systems are Y2K compliant. These companies expect to be 99 percent compliant by the end of the first quarter of 1999. Similarly, the credit card industry and the mortgage banking industry also appear to be making good progress with their Y2K efforts. The consumer electronics industry reports that consumers should not experience Y2K problems with electronic products other than some older model VCRs, camcorder, and fax machines. Home appliance and residential heating and cooling equipment manufacturers report through their trade associations that no Y2K-related failures are expected for these products.

Education

(Working Group Chair -- Department of Education)

The Education Working Group, chaired by the Department of Education (DOEd), has been working with key education associations to assess Y2K preparedness within the elementary/secondary

community, the higher education community, and among third party service providers (e.g., loan guarantee agencies, debt collection agencies, financial institutions).

In the summer of 1998, DOEd and the American Association of Community Colleges (AACC) surveyed AACC's 1,300 member schools on their Y2K preparedness. In the same timeframe, DOEd also surveyed more than 1,400 direct loan schools. The combined results indicated that 62 percent of postsecondary respondents reported the existence of a Y2K project plan at their institution. Seventy-six percent reported being either completely confident or very confident that their institution will be Y2K compliant by March 1999.

DOEd and the Council of Great City Schools conducted a survey of elementary and secondary schools' Y2K preparedness in spring 1998 in the nation's 50 largest school districts. Nearly one-third of respondents reported their district did not have a written Y2K plan. Over 90 percent, however, were confident that their systems would be compliant by January 1, 2000. A follow-up survey was launched in fall 1998, with results expected in January 1999. To better ascertain the level of Y2K preparedness among the elementary and secondary community in small and medium size school districts, DOEd and the American Association of School Administrators are designing a survey of Y2K readiness. Results are expected in early 1999.

Employment Related Protections

(Working Group Chair -- Department of Labor)

The Employment Related Protections Working Group, chaired by the Department of Labor (DOL), is aggressively working with the employment sectors of U.S. businesses and State and local governments in order to determine the status of Y2K efforts for employee health and safety and/or employment-related benefits related systems. The working group has asked 21 organizations representing DOL constituents to participate in a Year 2000 assessment of their membership. The umbrella organizations asked to participate represent manufacturing, general industry, construction, mining, labor unions, and State and local governments.

DOL is also working with the 53 State Employment Security Agencies, which administer the unemployment insurance (UI) program, to ensure that States and other jurisdictions are able to process and distribute UI benefits into the Year 2000.

Food Supply

(Working Group Chair -- Department of Agriculture)

The Food Supply Working Group (FSWG), led by the U.S. Department of Agriculture (USDA), is focused on the Y2K readiness of the U.S. food industry and on how the Y2K problem might affect foreign countries as markets for U.S. agricultural products and as suppliers of food products to the United States. The FSWG works to identify potential disruptions to supply and markets.

The FSWG reports its initial analysis indicates that the state of readiness within the food industry is encouraging. Major domestic companies that provide most of the foods the American public consumes are confident they will continue to operate in spite of the Y2K problem. The FSWG reports that an

interruption in the food supply so severe as to threaten the well-being and basic comfort of the American public is unlikely. The group's initial assessment also indicates that key foreign markets for U.S. food products will likely have a low risk of Y2K disruptions to their import, processing, distribution and retail chains. However, some countries and their domestic food supply industries have not yet made significant progress on the problem. Should there be a disruption of imports, domestically grown fresh fruits and vegetables are likely to continue to be available.

Health Care

(Working Group Chair -- Department of Health and Human Services)

The Health Care Working Group, chaired by the Department of Health and Human Services (HHS), is reaching out to health care professional and provider groups to assess the Y2K readiness of the health care community. These groups include: the American Ambulance Association, American Hospital Association, the American Medical Association, the Health Industry Manufacturers Association, the Joint Commission on Accreditation of Health Care Organizations, the National Association of Community Health Centers, Inc., and the National Association of Rural Health Clinics.

The survey data gathered to date is mostly centered on hospitals and larger health care facilities. Responses to an American Hospital Association survey and an informal survey conducted by *Medical Records Briefing* newsletter for the health information management industry, indicate that more than 70 percent of larger organizations have Y2K remediation plans in place. Their anticipated completion dates for Y2K work fall throughout 1999.

Throughout 1999, working group members plan to gather assessment information on Y2K readiness, especially among smaller health care organizations. With support from the Association of State and Territorial Health Officials, the Centers for Disease Control and Prevention (CDC) have sent a Y2K readiness assessment survey to 57 State and Territorial Health Officials. Results are expected by the end of January 1999. The HHS Inspector General's Office has plans to survey the Y2K readiness of a sample of Medicare providers.

Housing

(Working Group Chairs -- Department of Housing and Urban Development, General Services Administration)

The Buildings and Housing Working Group recently gathered initial assessment information from more than 150 housing authorities, public housing authorities, Tribally designated housing entities, grantees, and city/county neighborhood housing and community economic development offices.

Survey results indicate that, as a whole, there is a high level of awareness of the problem within the Housing Sector. But much work remains. Overall, 25 percent of respondents have completed work on mission-critical application systems, and 8 percent have completed work on embedded chips.

Results from this initial survey will factor into the design of on-going efforts to monitor and motivate

preparations by these sector participants during 1999.

Human Services

(Working Group Chair -- Department of Health and Human Services)

The Human Services Working Group, chaired by the Department of Health and Human Services (HHS), monitors the level of Year 2000 preparedness for many human services programs. They include: Temporary Assistance for Needy Families (TANF), Head Start, Medicaid, the Food Stamp Program (FSP) and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

HHS will obtain updated information on the Y2K compliance status of its State administered programs and conduct periodic reassessments of State Y2K efforts throughout 1999. On Medicaid, the Health Care Financing Administration (HCFA) is working with a contractor to assess the status of State Medicaid-related Y2K efforts. HCFA staff will visit all States at least twice in 1999. The Department of Agriculture's Food and Nutrition Service will continue to prepare quarterly reports on the Y2K status of State systems supporting the FSP and WIC, focusing on software, hardware, and telecommunications compliance.

Information Technology

(Working Group Chair -- Department of Commerce)

The Information Technology Working Group promotes action on the Y2K problem among the broad spectrum of companies that make up the information technology (IT) industry. The group conducts its outreach through organizations such as the Information Technology Association of America, the Institute of Electrical and Electronics Engineers, the Business Software Alliance, and the Internet Society.

The working group is forming a task force to assess the Y2K readiness of the IT sector as a whole, taking into account both business operations and products and services. Results are expected in late January 1999. More information about the working group can be found at y2k.ita.doc.gov.

International Trade

(Working Group Chair -- Department of Commerce)

The International Trade Working Group, which includes representatives from the Commerce Department's U.S. and Foreign Commercial Service, the U.S. Customs Service, the Department of Transportation, and the U.S. Information Agency, is working with a number of key trade associations to help assess the progress of Y2K efforts in three critical areas of international trade: infrastructure (transportation and logistics), manufacturing (suppliers and buyers), and services (financial and legal

services).

Participating organizations include the American Association of Port Authorities, the American Chambers of Commerce (overseas), the American Warehouse Association, the Chamber of Shipping of America, the Export Legal Assistance Network, the International Trade Council, the National Customs Brokers and Freight Forwarders Association, the Small Business Exporters Association, the Small Business Industry Sector Advisory Council, and the U.S. Council for International Business.

In February 1999, each of our association representatives will complete a report on its members' Y2K preparedness. In January 1999, the U.S. and Foreign Commercial Service is scheduled to release in the first quarter of 1999 a report on the Y2K activities of foreign governments via the Internet at *www.y2k.ita.doc.gov*.

Non-Profit Organizations and Civic Preparedness

(Working Group Chair -- Office of Personnel Management)

This working group, which has representatives from the Office of Personnel Management (OPM), the Department of Health and Human Services and the Federal Emergency Management Agency, is tracking the Y2K progress of non-profit organizations and coordinating inter-sector communications related to civic preparedness.

OPM conducted in August 1998 an informal Y2K readiness poll of several non-profit and charitable organizations within the Federal Government's Combined Federal Campaign. The responses indicated that most large national organizations and their local chapters/affiliates are aware of Y2K, and are taking measures to ensure that their internal systems will be ready for the century date change. Few organizations, however, were assessing internal embedded chip-based systems or outside partners' Y2K progress. Results of a more detailed survey, which attempts to reach most non-profits 501(c)(3) organizations, will be available in February 1999.

Police/Public Safety/Law Enforcement/Criminal Justice

(Working Group Chair -- Department of Justice)

This working group, chaired by the Department of Justice (DOJ), has been working with a number of non-Federal organizations to promote action on the Y2K problem. These organizations include: the International Association of Chiefs of Police, the National Association of Attorneys General, the National Association of Police Organizations, the National District Attorneys Association, the National Sheriffs Association, and the National Troopers Coalition.

Based on informal assessment information, there is a high level of awareness of the problem among non-Federal police/law enforcement entities. State police/law enforcement entities and departments in larger metropolitan areas are making good progress. However, most departments at the county and

municipality level lack the sophistication to assess the Y2K readiness of their service providers. These departments do not have their own, dedicated IT resources -- money and professional staffing -- and are instead dependent on the IT departments of the county, city, or municipality of which they are a part. Dedicated radio communications and dispatch systems are a concern for all police/law enforcement organizations and the working group is encouraging departments to focus on contingency planning in this area.

Tribal Governments

(Working Group Chairs -- Department of the Interior, General Services Administration)

As part of an effort to promote action on the Y2K problem in the Native American community, the General Services Administration and the Interior Department's Bureau of Indian Affairs in December 1998 worked with the National Congress for American Indians to distribute a Y2K information package to the leaders of the 554 recognized tribes. Other outreach activities included recent meetings with Alaska tribes and the Navajo Nation. Another meeting is scheduled at the end of January 1999 with 39 tribes in Oklahoma.

Other Federal agencies in the Tribal Governments Working Group, such as the Environmental Protection Agency and the Indian Health Service, are now meeting with the Bureau of Indian Affairs to design and plan a survey that will better define specific Y2K concerns within Tribal communities.

Y2K Workforce Issues

(Working Group Chair -- Department of Labor)

The Y2K Workforce Issues Working Group, chaired by the Labor Department, conducts outreach to connect organizations seeking Y2K assistance to those who have skills for tackling the problem. One of the group's key initiatives is the IT Job Bank (*it.jobsearch.org*). This subset of the Labor Department 's "America's Job Bank" (*www.ajb.dni.us*) is a free Internet resource designed to help employers connect with individuals that have Y2K expertise.

The working group also reports to the Council Chair on the status of the Y2K labor force within the Federal Government and in other areas. For the most part, the Federal Government has thus far not experienced labor shortages among personnel qualified for fixing the problem. Personnel costs in the private sector are increasing. There has been some anecdotal information on shortages in some industries, but thus far there is no evidence of a systemic labor shortage in the private sector. Concerns are mounting, however, about how increasing international Y2K activity may affect the supply of qualified personnel.